

### Overview

Installed at the display device, the UDM-RX01 (FG-UDM-RX01) converts the signal received from a UDM Multi-Format Distribution Hub to standard A/V signals (FIG. 1).



FIG. 1 UDM-RX01

With intelligent receiver technology, each UDM-RX01 is powered directly from the UDM Multi-Format Distribution Hub. As the hub is switched from one video/audio source to another, the receiver detects a change in signal and automatically switches the output device to its new video format.

### Compatibility

The UDM-RX01 is compatible for use with the following UDM Hubs:

- UDM-0102 (FG-UDM-0102)
- UDM-0404 (FG-UDM-0404)
- UDM-1604 (FG-UDM-1604C)
- UDM-1604 (FG-UDM-1604)

### Product Specifications

UDM-RX01 Specifications	
Power Requirements:	24VDC @ .75A <b>Note:</b> The UDM-RX01 is remotely powered by the UDM Multi-Format Distribution Hub (see System Overview).
<b>Rear Panel Connectors:</b>	
Power Socket:	2.1mm barrel-style DC power socket (female)
UDM Hub (RJ45) Port:	Provides audio/video transport as well as control via Cat5, Cat5e or Cat6 to an UDM Hub.
Serial (RJ12) port:	Enables an administrator to control the various functions to the UDM-RX01 from a command line prompt and terminal connection. • Requires a DB9-to-RJ12 adapter cable (FG-RS01) to connect to a PC. • 9600, 8 bit, No Parity, 1 Stop Bit
IR Rx Port:	3.5mm stereo input port, for connection of an IR receiver to allow setup of the UDM-RX01, local compensation controls, and remote control of centrally located IR devices.
IR Tx Port:	3.5mm stereo IR Transmitter output port allows one IR-controlled device (such as a DVD or VCR player) to be controlled via optional wired IR emitter.
Audio Connectors:	<ul style="list-style-type: none"> <li>• Black RCA female connector - Digital audio</li> <li>• White RCA female connector - Analog audio Left</li> <li>• Red RCA female connector - Analog audio Right</li> </ul>
Video Connectors:	<ul style="list-style-type: none"> <li>• Yellow RCA female connector - CVBS (supports composite video)</li> <li>• S-Video - S-video female connector</li> <li>• VGA - HD15 female connector (supports VGA video)</li> <li>• Green RCA female connector - Component output: Y</li> <li>• Blue RCA female connector - Component output: Pb</li> <li>• Red RCA female connector - Component output: Pr</li> </ul>
Operating Environment:	<ul style="list-style-type: none"> <li>• 35°F - 95°F (5°C - 35°C)</li> <li>• Max. relative humidity - 85% (non-condensing)</li> </ul>
Dimensions (HWD):	1" x 8 15/16" x 3 3/8" (25 mm x 227 mm x 85 mm)
Weight:	1.45 lb. (658 g)
Certifications:	<ul style="list-style-type: none"> <li>• CE</li> <li>• FCC part 15 Class A</li> </ul>
Other AMX Equipment:	<ul style="list-style-type: none"> <li>• RS232 DB9/RJ12 Connection Cable (FG-RS01)</li> <li>• UDM-RC02 Multi-Format IR Remote Control (FG-UDM-RC02)</li> <li>• IR01 IR Emitter Module (FG-IR01)</li> <li>• IR03 External IR Receiver Module (FG-IR03)</li> <li>• UDM-PS 24VDC, 750mA Power Supply (FG-UDM-PS)</li> </ul>

### Configuration

The UDM-RX01 is configured via the UDM Hub's WebConsole. Refer to the UDM Hub's *Operation/Reference Guide* for details.

### Rear Panel Components

All of the connectors and ports are located on the rear panel (FIG. 2):

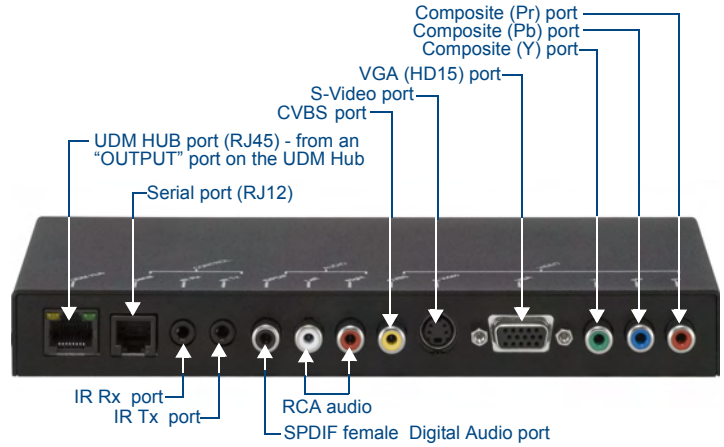


FIG. 2 UDM-RX01 - rear panel components

### UDM Hub Port (RJ45)

The UDM-RX01 connects to the network through a connection to a UDM Hub. Refer to the UDM Hub's *Operation/Reference Guide* for details.

### Serial Port

The Serial port is available for diagnostic and troubleshooting purposes.

The Serial port on the UDM-RX01 is an RJ12 connector, and requires a DB9-to-RJ12 adapter cable (FG-RS01) to connect to a PC for Terminal control.

### IR Receiver (IR Rx) Port

The IR Rx port is used to enable user control and the remote compensation of the video link to the UDM, using the FG-UDM-RC10 and the FG-IR03.

Refer to the *Protocols and IR Learning* section of the UDM Hub's *Operation/Reference Guide* for details for information on learning a device's IR commands.

### IR Transmit (IR Tx) Port

The IR Tx port issues IR commands from the UDM-RX01 to a controlled device. One IR device (such as DVD player or VCR) can be connected to the UDM-RX01 via the IR Tx port, and controlled via the UDM Hub's WebConsole or via remote control.

**Note:** IR devices controlled via the IRTX ports are typically installed within the same equipment rack as the UDM Hub and Receiver.

### Connecting an IR Device to the IR Tx Port

1. Connect an IR01 Endeleo IR Emitter Module (FG-IR01) to the IR Tx port on the UDM-RX01.

**Note:** Ensure the position of the device corresponds to the position assigned in the Devices option of the UDM-Hub's WebConsole.

2. Run the other end of the IR Emitter cable to the device's IR sensor, and attach the IR Emitter to the device's sensor by removing the cover on the reverse side of the IR Emitter.

IR commands for each device on the system have to be learned by the UDM hub in order to function properly. Refer to the *Protocols and IR Learning* section of the UDM Hub's *Operation/Reference Guide* for information on learning a device's IR commands.

### Audio Connectors

The UDM-RX01 provides standard Audio RCA output connectors for S/PDIF for digital audio, and LEFT/RIGHT for analog audio output (FIG. 2).

### Video Connectors

#### VGA Input at Display Device

1. Attach one end of the Endeleo VGA to VGA cable to the VGA connector on the UDM-RX01.
2. Run the other end to the VGA connector on the display device. Connect firmly.
3. If appropriate connect audio to the audio connectors on the UDM-RX01.

**Note:** Ensure Input A is configured as a "VGA Input" and named appropriately within the "Inputs" section of the Hub's Configuration software. Also ensure the correct Audio Type (Analog L/R or S/PDIF) is selected for the relevant input.

## Composite Input at Display Device

1. Attach the composite cable (normally yellow) to the **CVBS** connector on the UDM-RX01.
2. Run the other end of the composite cable to the Composite connector (normally yellow) on the display device. Connect firmly.
3. If appropriate connect audio to the audio connectors on the UDM-RX01.

## SVideo Input at Display Device

1. Attach the SVideo cable to the 4-pin **S Video** connector on the UDM-RX01.
2. Run the other end of the SVideo cable to the SVideo connector on the display device. Connect firmly.
3. If appropriate connect audio to the audio connectors on the UDM-RX01.

## Component Input at Display Device

1. Attach the Component cables (normally green, blue and red) to the **Y** (green), **Pb** (blue) and **Pr** (red) connectors on the UDM-RX01.
2. Run the other end of the Component cable to the Component connectors (normally green, blue and red) on the display device. Connect firmly.
3. If appropriate connect audio to the audio connectors on the UDM-RX01.

## Audio & Video Formats/Resolutions/Distance

Audio & Video Formats/Resolutions/Distance			
Class	Format	Name	Distance
Composite	720x480	NTSC	300 m / 1000'
	720x756	PAL	300 m / 1000'
Component	720x480	480p	300 m / 1000'
	720x756	576p	300 m / 1000'
	1280x720	720p	200 m / 650'
	1920x1080	1080i	150 m / 500'
	1920x1080	1080p	120 m / 400'
VGA	640x480	VGA	200 m / 650'
	800x600	SVGA	200 m / 650'
	1024x768	XGA	200 m / 650'
	1280x1024	SXGA	150 m / 500'
	1600x1200	UXGA	120 m / 400'

**Note:** The maximum distances indicated above are not absolute, but are recommended distances that have been tested to deliver video at the specified resolutions, without significant signal degradation. In particular, lower resolutions (640 x 480, 720 x 480 and 800 x 600) can often be delivered significantly further than what is indicated in the table.

Refer to the UDM Hub's *Operation/Reference Guide* for additional details on maximum cable distances.

## Video Compensation

Video at the Receive end can be compensated using three main methods;

- Using the UDM-Hub's WebConsole
- Using the UDM-RC02 Multi-Format IR Remote Control
- Using a hyper terminal session via the serial connector on the UDM-RX01 (especially effective setup method when using long runs)

## Connecting an External IR Receiver Module

If passthrough mode (where a device such as a DVD or VCR can be controlled via a remote control) is required then an IR03 External IR Receiver Module will be needed to pick up IR controls from the remote control.

Additionally, if the UDM-RX01 is to be compensated via a remote control, then an IR Receiver Module is also needed.

## Connecting the UDM-RX01 Receiver to the UDM Hub

The RJ45 port on the front panel of the UDM Hub labelled "UDM" supports one UDM-RX01 Receiver. The UDM-RX01 is then be connected to a display device.

1. Connect a standard Cat5/6 Ethernet cable to the RJ45 port labelled **UDM** on the front panel of the UDM hub.
2. Connect the other end of the Ethernet cable to the RJ45 port labelled **UDM Hub** on the rear panel of the UDM-RX01.

**Note:** Ensure the port the UDM-RX01 is attached to is configured correctly within the Status option of the WebConsole (for example, if a UDM-RX01 is connected to the Hub, ensure the port in the Status option is configured likewise).

## UDM HUB Port LEDs

2 LEDs are visible at the **UDM Hub** port (on the UDM-RX01) when the UDM hub is switched on:

- **Green** – Connection to UDM-0102 (if Cat 5 removed, LED switches off).
- **Amber** – Power (as well as comms if uploading protocols etc. the Amber LED may flicker).

## System Overview

FIG. 3 provides a basic system diagram representing a UDM Hub, UDM-RX01 Receiver, and connected devices:

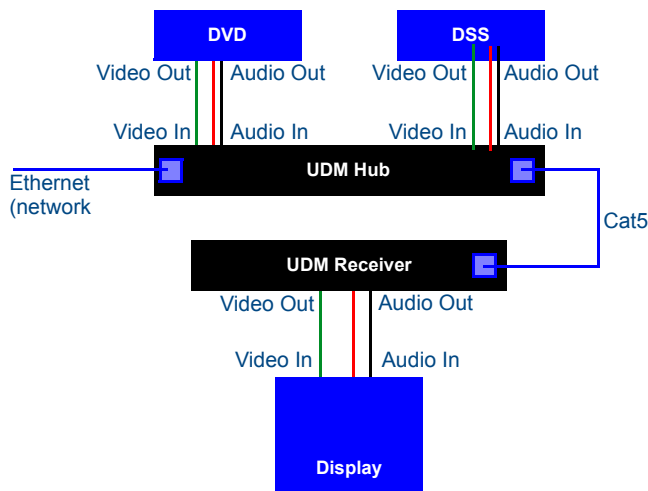


FIG. 3 UDM System Diagram

## Additional Documentation

Refer to the relevant *UDM Hub Operation/Reference Guide* (available online at [www.amx.com](http://www.amx.com)) for detailed information on configuring the UDM Hub, UDM receivers and source devices.

